AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. – 12. (Cancelled)

13. (New) An electronic apparatus forming one of a sensor, an actuator and a control that communicates with at least one additional electronic apparatus via a data bus using a pre-determined communications protocol, the electronic apparatus comprising:

a bus interface;

a control engine that comprises:

an application-specific engine that controls the electronic apparatus independently of the communications protocol; and

a bus protocol-specific engine that transmits and receives data via a bus interface and that exchanges application-specific data with said application-specific engine via a standardized interface;

wherein data received via the standardized interface is converted into the communications protocol by the bus-protocol-specific engine and data received via the bus interface is converted into corresponding application-specific data by the bus-protocol-specific engine.

14. (New) The electronic apparatus of claim 13, wherein the control engine includes a plurality of bus protocol-specific engines and a plurality of bus protocols, each of the

bus protocol-specific engines being associated with a bus protocol and wherein each bus protocol-specific engine converts application-specific data into the associated bus protocol and converts data received via the bus interface in the associated bus protocol into application-specific data.

15. (New) The electronic apparatus of claim 14, wherein a different bus interface is associated with each bus protocol-specific engine.

16. (New) The electronic apparatus of claim 14, wherein at least some of the bus protocol-specific engines are associated with a single bus interface and a selection unit determines which bus protocol-specific engine is implemented.

17. (New) The electronic apparatus of claim 16, wherein the bus protocol-specific engine is manually selected using the selection unit.

18. (New) The electronic apparatus of claim 16, wherein the bus protocol-specific engine is automatically selected using the selection unit based on a currently implemented bus protocol.

19. (New) The electronic apparatus of claim 13, wherein a set of elements is communicated to the control engine, each of which defines a type of permitted application-specific data.

20. (New) The electronic apparatus of claim 19, wherein said set of elements includes at least one of variables, methods, messages and events.

21. (New) A configuration apparatus for configuring an electronic apparatus that is one of a sensor, an actuator and a control, comprising:

a bus interface;

a configuration engine that comprises:

an application-specific engine that controls the configuration apparatus independently of the communications protocol; and

a bus protocol-specific engine that transmits and receives data via a bus interface and that exchanges application-specific data with said application-specific engine via a standardized interface that is common to a standardized interface of the configuration apparatus;

wherein data received via the standardized interface is converted into the communications protocol by the bus-protocol-specific engine and data received via the bus interface is converted into corresponding application-specific data by the bus-protocol-specific engine.

22. (New) The configuration apparatus of claim 21, that reads out and sets application-specific pre-determined settings of the to-be-configured electronic apparatus.

23. (New) The configuration apparatus of claim 21, wherein the configuration apparatus is provided as a computer and the configuration engine and the bus protocol-specific engine are provided as computer programs.

24. (New) The configuration apparatus of claim 23 wherein the computer includes one of a personal computer (PC) and a handheld device (PDA),

25. (New) A bus system, comprising:

a data bus; and

a plurality of apparatuses each of which is one of a sensor, an actuator and a control and each of which comprises:

a bus interface;

a control engine that includes an application-specific engine that controls the apparatus independently of the communications protocol and a bus protocol-specific engine that transmits and receives data via a bus interface and that exchanges application-specific data with said application-specific engine via a standardized interface, wherein data received via the standardized interface is converted into the communications protocol by the bus-protocol-specific engine and data received via the bus interface is converted into corresponding application-specific data by the bus-protocol-specific engine.

26. (New) The bus system of claim 25, wherein each of the bus protocol-specific engines are associated with a single bus interface and a selection unit determines which bus protocol-specific engine is implemented.